

REMARKS**Restriction Requirement**

Applicant hereby traverses the restriction requirement for reasons set out below.

However, Applicant is aware that a conditional election is mandatory.

Regarding the conditional election, if Applicant's traversal is not ultimately granted by the Examiner or upon petition or appeal, Applicant hereby elects to prosecute claims 1-11 as herein amended, i.e., group I, as identified by Examiner.

Applicant herein amends claims 1, 12 and 13 in order to more certainly ensure that the claims are directed to a single invention and that in all the claimed forms of the invention, the claims include processes performed by a computer system. No new matter is presented, since the original application provides support. See original application, as published, paragraph 101 and FIG. 10 (data representations are implemented by a computer system such as generally shown in FIG. 10, wherein software of the computer performs techniques disclosed in the application); paragraph 0027 (data preprocessing and pattern discovery algorithms are run on the data); paragraph 0012 (parallel processing is enabled due to disclosed data structure); paragraph 119 and 135 (applications access the data). Note also that the specification makes it clear that the disclosed tasks are not practical for performance by hand. See, paragraph 102 (not ideal even for a single processor computer system); see also paragraph 0003 (human genome 4 billion bases in length), and paragraph 117 (turnaround time for application processes growing exponentially).

Applicant submits that at least due to the amendments herein, the claims do not encompass independent or distinct inventions. Further, the instructions and processes of claim 12 and the computer system and software of claim 13 are related to the process described in claims 1-11 to such an extent that all claims may be substantially comprehended by the same patentability search, so that examining all claims together does not present a serious burden on the Examiner. Either of these grounds is alone sufficient to overcome the restriction requirement. See MPEP 803 (stating that grounds for restriction require that the inventions must be independent or distinct as claimed *and* examination must otherwise present a "serious burden" on the Examiner).

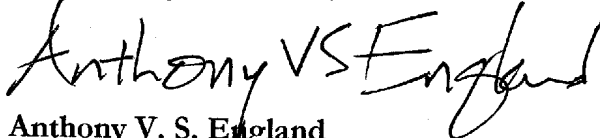
Other Amendments

Applicant additionally herein amends claims as set out above in order to i) ensure the claims are definite and provide sufficient antecedent basis for all terms, in accordance with 35 USC 112, ii) ensure the claim fall within permissible subject matter, in accordance with 35 USC 101, and iii) properly format the claims. No new matter is presented, since the original application provides support. See remarks herein above, and also original application, as published, paragraph 0040 (removing replets from data sequence in order to generate backbone data sequence); paragraphs 41-42 and 50-51 (associating replets with subsequences and storing portions of the subsequences, i.e., "variations," that do not correspond to their respective replet).

REQUESTED ACTION

For the reasons explained herein above, Applicant requests that all the claims, as amended, be examined.

Respectfully submitted,



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